

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	)	<u>CERTIFICATE OF EFS WEB FILING</u>
)	
THOMAS TIEDEMANN and	)	I hereby certify that this correspondence is
OTFRIED SCHWARZKOPF	)	being electronically filed via the USPTO
	)	Electronic Filing System (EFS Web) on
Application No. 10/049,690	)	this 6th day of June, 2008.
Filed: June 18, 2002)	
)	
Patent No. 6,957,604	)	<u>/Marlene Kubiak/</u> 06/06/08
Issued: October 25, 2005	)	Marlene Kubiak
)	
Group Art Unit: 3746)	
)	
Examiner: Han L. Lui)	
)	
AXIAL PISTON DRIVE WITH A)	
CONTINUOUSLY ADJUSTABLE)	
PISTON STROKE)	

REQUEST FOR STATUS & REQUEST FOR REFUND

Commissioner of Patents
P.O. Box 1450
Arlington, VA 22313-1450

Sir:

Attached are copies of the following documents:

1. Request for Refund which was filed with the United States Patent & Trademark Office on July 16, 2004.
2. United States Patent & Trademark Office communication dated August 11, 2004 indicating that the request had been forwarded to the Technical Center for review and processing.
3. Request for Status which was filed with the United States Patent & Trademark Office on November 26, 2007.

To date, we have not received a refund or any communication subsequent to the August 11, 2004 USPTO communication regarding review and processing.

The undersigned hereby requests a refund in the amount of \$2,010.00 to be deposited to the undersigned's Deposit Account No. 01.2000.

Patent No. 6,957,604

Inventors: Thomas Tiedemann and Otfreid Schwarzkopf

The USPTO is encouraged to contact the undersigned regarding any questions.

Respectfully submitted,

/Gary A. Essmann/

Gary A. Essmann (Reg. No. 29,376)

Andrus, Sceales, Starke & Sawall, LLP

100 East Wisconsin Avenue, Suite 1100

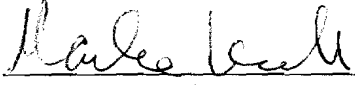
Milwaukee, WI 53202

414-271-7590

Atty. Docket No: 825-00161

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:)	<u>CERTIFICATE OF EFS WEB FILING</u>
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THOMAS TIEDEMANN and)	I hereby certify that this correspondence is
OTFRIED SCHWARZKOPF)	being electronically filed via the USPTO
	)	Electronic Filing System (EFS Web) on
Application No. 10/049,690	)	this 26th day of November, 2007.
Filed: June 18, 2002)	
)	
Patent No. 6,957,604	)	11/26/07
Issued: October 25, 2005	)	Marlene Kubiak
)	
Group Art Unit: 3746)	
)	
Examiner: Han L. Lui)	
)	
AXIAL PISTON DRIVE WITH A)	
CONTINUOUSLY ADJUSTABLE)	
PISTON STROKE)	

REQUEST FOR STATUS

Commissioner of Patents
P.O. Box 1450
Arlington, VA 22313-1450

Sir:

Attached is a copy of a Request for Refund which was filed with the United States Patent & Trademark Office on July 16, 2004. Also attached is a copy of a United States Patent & Trademark Office communication dated August 11, 2004 indicating that the request had been forwarded to the Technical Center for review and processing.

To date, we have not received a refund.

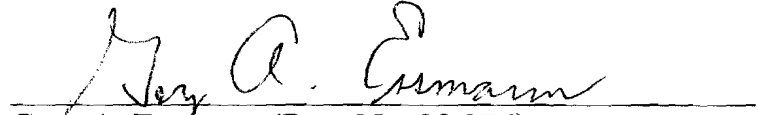
The undersigned requests a refund in the amount of \$2,0120.00 to be deposited to the undersigned's Deposit Account No. 01.2010.

Patent No. 6,957,604

Inventors: Thomas Tiedemann and Otfreid Schwarzkopf

The USPTO is encouraged to contact the undersigned regarding any questions.

Respectfully submitted,



Gary A. Essmann (Reg. No. 29,376)

Andrus, Sceales, Starke & Sawall, LLP
100 East Wisconsin Avenue, Suite 1100
Milwaukee, WI 53202
414-271-7590
Atty. Docket No: 825-00161

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:

THOMAS TIEDEMANN and
OTFRIED SCHWARZKOPF

Application No. 10/049,690

Filed: June 18, 2002

Group Art Unit: 3746

Examiner: Han L. Lui

AXIAL PISTON DRIVE WITH A
CONTINUOUSLY ADJUSTABLE
PISTON STROKE

CERTIFICATE OF MAILING

I hereby certify that the
correspondence is being deposited
with the United States Postal Service
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mail in an envelope addressed to:
Director of the United States Patent and
Trademark Office, P.O. Box 1450,
Alexandria, VA 22313-1450 this 16th day
of July, 2004.

 07/16/2004
Marlene Kubiak Date

REQUEST FOR REFUND

Mail Stop 16

Director of the United States Patent and Trademark Office

P.O. Box 1450

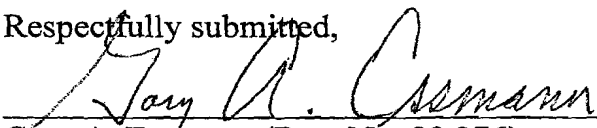
Alexandria, VA 22313-1450

Sir:

Attached is a copy of a decision on applicants' Petition to Revive the above-identified unintentionally abandoned application. A Petition to Revive and Amendment was forwarded to the United States Patent and Trademark Office on June 7, 2004.

In accordance with the decision on applicants' Petition to Revive (copy enclosed), this is a request for a refund of the \$2,010.00 extension of time fee submitted with the Petition.

Respectfully submitted,


Gary A. Essmann (Reg. No. 29,376)

Andrus, Sceales, Starke & Sawall, LLP
100 East Wisconsin Avenue, Suite 1100
Milwaukee, WI 53202
414-271-7590
Atty. Docket No: 825-00161



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

Paper No. 11

**GARY A ESSMANN
ANDRUS SCEALES STARKE & SAWALL
SUITE 1100
100 EAST WISCONSIN AVENUE
MILWAUKEE, WI 53202-4178**

COPY MAILED

JUN 23 2004

OFFICE OF PETITIONS

In re Application of
Thomas Tiedemann et al
Application No. 10/049,690
Filed: June 18, 2002
Attorney Docket No. 825-161

ON PETITION

This is a decision on the petition under 37 CFR 1.137(b), filed June 10, 2004, to revive the above-identified application.

The petition is **GRANTED**.

The above-identified application became abandoned for failure to reply in a timely manner to the non-final Office action mailed August 27, 2003, which set a shortened statutory period for reply of three (3) months. No extensions of time under the provisions of 37 CFR 1.136(a) were obtained. Accordingly, the above-identified application became abandoned on November 28, 2003.

37 CFR 1.137(b)(3) requires a statement that the entire delay in filing the required reply from the due date for the reply until the filing of a grantable petition pursuant to 37 CFR 1.137(b) was unintentional. If the statement contained in the instant petition varies from the language required by 37 CFR 1.137(b)(3), the statement contained in the instant petition is being construed as the statement required by 37 CFR 1.137(b)(3) and petitioner must notify the Office if this is **not** a correct interpretation of the statement contained in the instant petition.

An extension of time under 37 CFR 1.136 must be filed prior to the expiration of the maximum extendable period for reply. See In re Application of S., 8 USPQ2d 1630, 1631 (Comm'r Pats. 1988). Accordingly, since the \$2,010.00 extension of time submitted with the petition on June 10, 2004 was subsequent to the maximum extendable period for reply, petitioner may request a refund of this fee by writing to: Mail Stop 16, Director of the United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. A copy of this decision should accompany petitioner's request.

FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision

☐ Applicant claims small entity status. See 37 CFR 1.27

Complete if Known

Application Number	10/049,690
Filing Date	06/18/2002
First Named Inventor	Thomas Tiedemann
Examiner Name	Han L. Lui
Group Art Unit	
Attorney Docket No.	825-00161

TOTAL AMOUNT OF PAYMENT (\$) 3340

METHOD OF PAYMENT (check all that apply)

☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☐ Deposit Account:

Deposit
Account
Number

Deposit
Account
Name Andrus, Sceales, Starke & Sawall, LLP

The Commissioner is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Credit any overpayments

☒ Charge any additional fee(s) necessary for this submission

☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

Large Entity	Small Entity	Fee Code	Fee (\$)	Fee Description	Fee Paid
		1001	750	Utility filing fee	
		1002	340	Design filing fee	
		1003	530	Plant filing fee	
		1004	770	Reissue filing fee	
		1005	160	Provisional filing fee	

SUBTOTAL (1)

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

	Extra Claims	Fee from below	Fee Paid
Total Claims	=	X	=
Independent Claims	=	X	=
Multiple Dependent	=		=

Large Entity	Small Entity	Fee Code	Fee (\$)	Fee Description
		1202	18	Claims in excess of 20
		1201	86	Independent claims in excess of 3
		1203	290	Multiple dependent claim, if not paid
		1204	86	** Reissue independent claims over original patent
		1205	18	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$)

** or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for <i>ex parte</i> reexamination	
1804	920*	1804	920*	Requesting a publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply with second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	2,010
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	1,330
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR § 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Requests for expedited examination of a design application	

Other fee (specify) _____

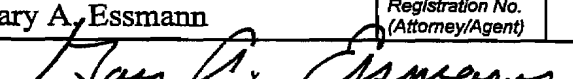
*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$)

3340

SUBMITTED BY

Complete (if applicable)

Name (Print/Type)	Gary A. Essmann	Registration No. (Attorney/Agent)	29,376	Telephone	414-271-7590
Signature				Date	06/07/2004

Please type a plus sign (+) inside this box → ☒

PTO/SB/21 (08-00)

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

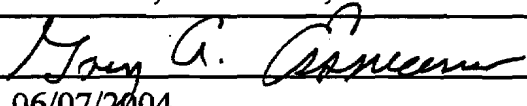
Application Number	10/049,690
Filing Date	06/18/2002
First Named Inventor	Thomas Tiedemann
Group Art Unit	
Examiner Name	Han L. Lui
Total Number of Pages in This Submission 16	Attorney Docket Number 825-00161

ENCLOSURES (check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input checked="" type="checkbox"/> Amendment / Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input checked="" type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53 <input type="checkbox"/> Request to Rescind Previous Nonpublication Request	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): <u>Postcard</u> _____ _____ _____
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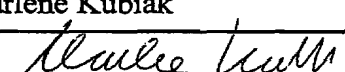
Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Gary A. Essmann (Reg. No. 29,376) ANDRUS, SCEALES, STARKE & SAWALL, LLP
Signature	
Date	06/07/2004

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner of the United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450 on this date: 06/07/2004

Typed or printed name	Marlene Kubiak		
Signature		Date	06/07/2004

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:

THOMAS TIEDEMANN and
OTFRIED SCHWARZKOPF

Application No. 10/049,690

Filed: June 18, 2002

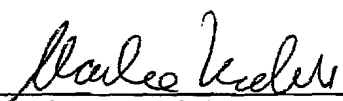
Group Art Unit: 3746

Examiner: Han L. Lui

AXIAL PISTON DRIVE WITH A
CONTINUOUSLY ADJUSTABLE
PISTON STROKE

CERTIFICATE OF MAILING

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) correspondence is being deposited
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) mail in an envelope addressed to:
) Commissioner for Patents, P.O. Box 1450,
) Alexandria, VA 22313-1450, this 7th day
) of June, 2004.

)  06/07/2004
) Marlene Kubiak Date

PETITION TO REVIVE PURSUANT TO 37 C.F.R. 1.137(b)

MS: PETITION

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

FACTS

An Office Action issued in this application on August 27, 2003 setting a three month period for response. An Amendment was not filed within the three month period, or any extension thereof, resulting in the abandonment of this application and the necessity of this Petition.

STATEMENT

The failure to make a timely response in this application within the three month period, or any extension thereof, was unintentional.

RESPONSE

An Amendment response to the Office Action of August 27, 2003 accompanies this Petition.

Application No. 10/049,690

Inventors: Thomas Tiedemann and Otfreid Schwarzkopf

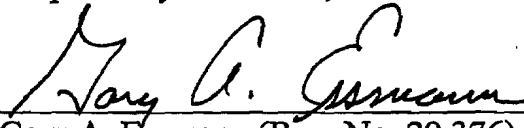
FEES

This Petition is accompanied by a petition fee set forth in 37 C.F.R. § 1.17(m) in the amount of \$1,330 and also including an amount of \$2,010 for the extension fee provided 37 C.F.R. § 1.17(a), for a total of \$3,340.

CONCLUSION

Revival of this application to pending status to the extent noted above is respectfully sought.

Respectfully submitted,



Gary A. Essmann (Reg. No. 29,376)

Andrus, Sceales, Starke & Sawall, LLP
100 East Wisconsin Avenue, Suite 1100
Milwaukee, WI 53202
(414) 271-7590
Atty. Docket No: 825-00161

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:

THOMAS TIEDEMANN and
OTFRIED SCHWARZKOPF

Application No. 10/049,690

Filed: June 18, 2002

Group Art Unit: 3746

Examiner: Han L. Lui

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first class mail in an envelope addressed
to: Commissioner for Patents, P.O. Box
1450, Alexandria, VA 22313-1450, this
7th day of June, 2004.

 06/07/2004
Marlene Kubiak Date

AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated August 27, 2003, a five (5) month request for extension of time with fee attached included, please amend the above identified application as follows:

Amendments to the Specification begin on page 2 of this paper.

Amendments to the Claims are reflected in the listing of claims which begins on page 4 of this paper.

Amendments to the Abstract begin on page 8 of this paper.

Remarks/Arguments begin on page 9 of this paper.

AMENDMENT TO THE SPECIFICATION

Page 1: replace the paragraph starting at lines 12 through 14 as follows:

The invention relates to an axial piston drive with a continuously adjustable piston stroke ~~according to the precharacterizing clause of Claim 1.~~

Page 9: replace the paragraph starting at lines 24 through 28 as follows:

The ~~positioning~~ setting piston 44, together with the cylinder, encloses a pressure space 74 that is sealed off by three seals 68, 70, 72. The swash plate 16 is connected to the adjustor housing 54 by way of a joining element 66, which is formed integrally with the swash plate 16, and by an off-centre joint 52.

Page 9: replace the paragraphs starting at lines 29 through 32 and page 10 starting at lines 1 through 13 as follows:

When compressed oil enters the pressure space 74, the ~~positioning~~ setting piston 44 is displaced, together with the sleeve 64, the joint head 48 and the swash plate 16, in the direction towards the cylinders 22, 24, against a prestressed pressure spring 92 (Fig. 2). The pressure spring 92 is nonrotatably attached to the drive shaft 10 and is braced against a tension ring 94 in the direction away from the setting piston 44. By the off-centre joint 52, formed by a bolt 98 that is fixed to the joining element 66 and is guided within a slot 96, the stroke movement of the swash plate 16 causes a moment of tilt acting on the swash plate 16. Upon the stroke movement of the swash plate 16 is superimposed a tilting movement, guided by the bolt 98 in the slot 96, so that in all cases a top-dead-centre point 100 of the piston 26, 28 within the cylinders 22, 24 is preserved. So that only a small amount of oil is required, the volume of the pressure space 74 is preferably small.

Pages 11 and 12: replace the paragraphs starting at lines 13 through 33 on page 11, and lines 1 through 10, page 12, as follows:

Application No. 10/049,690

Inventors: Thomas Tiedemann and Otfreid Schwarzkopf

Response to 08/27/03 Office Action

Figure 3 shows part of a variant of an axial piston drive with a controller 20. Components that are substantially the same are in general identified by the same reference numerals. Regarding the function and components not shown here, reference is made to the exemplary embodiment in Figs. 1 and 2. The controller 20 comprises an adjustment unit 32 with a setting piston 46 that is nonrotatably disposed in an annular recess 122 in a housing 114 of the axial piston drive. This arrangement makes an additional adjustor housing unnecessary. The ~~positioning~~ setting piston 46 is loaded in the direction towards the swash plate 16 by a first compression spring 136, is sealed off from the housing 114 by two seals 116, 118 and acts on the swash plate 16 in the axial direction, by way of a sleeve 120 and a joint head 50 formed integrally with the sleeve 120, against a second prestressed, stronger pressure spring 124. In the direction away from the setting piston 46 the spring 124 is braced against a shoulder 126 of a drive shaft 12. The swash plate 16 is braced in the axial direction by an off-centre joint (not shown here), so that the stroke movement of the swash plate 16 exerts a moment of tilt on the swash plate 16. The setting piston 46 and the sleeve 120 are connected to one another by an axial bearing 128 that acts on both sides, such that the ~~positioning~~ setting piston 46 forms inner bearing faces whereas the sleeve 120 and a fastening element 130 form outer bearing faces. With the fastening element 130, which is connected to the sleeve 120 by a screw thread 132, the degree of axial play in the axial bearing 128 can be set to a specified value. The adjustment unit 32, i.e. the setting piston 46, is supplied with compressed oil from an oil separator 34 by way of an axial bore 134, as is the adjustment unit 30 (cf. relevant part of Fig. 4).

Application No. 10/049,690

Inventors: Thomas Tiedemann and Otfreid Schwarzkopf

Response to 08/27/03 Office Action

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Previously Presented): Axial piston drive with a continuously adjustable piston stroke, comprising a drive shaft (10, 12) on which a swash plate (16) is supported in a crank chamber (14) in such a way as to be tiltable and displaceable in the axial direction, and with a controller (18, 20) by means of which an tilt angle and an axial position of the swash plate (16) can be adjusted, and with at least one piston (26, 28) connected to the swash plate (16) so that it can be actuated to move within a cylinder (22, 24), wherein the controller (18, 20) incorporates an adjustment unit (30, 32) that is separated from the piston (26, 28) and hydraulically driven,

characterized in that the adjustment unit (30, 32) is supplied with compressed oil by a hydraulic unit that is independent of the medium being propelled by the piston (26, 28).

Claim 2 (Canceled)

Claim 3 (Canceled)

Claim 4 (Currently amended): Axial piston drive according to Claim ~~2~~ 1, characterized in that the hydraulic adjustment unit (30, 32) is supplied with compressed oil by an oil separator (34) disposed downstream of the cylinder (22, 24).

Claim 5 (Currently amended): Axial piston drive according to Claim 4, characterized in that the hydraulic adjustment unit (30, 32) is connected to the crank chamber (14) by way of a drain (36), and a influx (38) from the oil separator (34) to the

Application No. 10/049,690

Inventors: Thomas Tiedemann and Otfreid Schwarzkopf

Response to 08/27/03 Office Action

adjustment unit (30, 32) or the drain (36) from the adjustment unit (30, 32) to the crank chamber (14) can be controlled.

Claim 6 (Currently amended): Axial piston drive according to Claim-~~5~~ 4, characterized in that in the oil separator (34) and/or in the crank chamber (14) at least part of an oil-level controller (40) is disposed which, when a specified oil level in the oil separator (34) is exceeded and/or when the oil in the crank chamber (14) falls below a certain level, connects the oil separator (34) to the crank chamber (14) by way of a channel (42).

Claim 7 (Currently amended): Axial piston drive according to Claim-~~5~~ 4, characterized in that in the oil separator and an amount of oil that is present are matched to one another in such a way that before an oil deficiency appears in the crank chamber (14), the oil separator overflows and the overflowing oil flows back into the crank chamber (14).

Claim 8 (Original): Axial piston drive according to Claim 4, characterized in that in the adjustment unit (30, 32) is connected to the crank chamber (14) by way of a drain (36), and a influx (38) from the oil separator (34) to the adjustment unit (30, 32) and the drain (36) from the adjustment unit (30, 32) to the crank chamber (14) can be controlled.

Claim 9 (Currently amended): Axial piston drive according to ~~one of the preceding claims~~ claim 1, characterized in that the swash plate (16) is supported on a joint head (48, 50) that can be axially displaced by means of a setting piston (44, 46) of the hydraulic adjustment unit (30, 32) and the swash plate (16) is connected by an off-centre joint (52) to a component (54) that is fixed in the axial direction.

Application No. 10/049,690

Inventors: Thomas Tiedemann and Otfreid Schwarzkopf

Response to 08/27/03 Office Action

Claim 10 (Original): Axial piston drive according to Claim 9, characterized in that in the setting piston (44) and the joint head (48) are constructed in one piece.

Claim 11 (Canceled)

Claim 12 (Canceled)

Add new claim 13 as follows:

13. Axial piston drive with a continuously adjustable piston stroke, comprising a drive shaft (10, 12) on which a swash plate (16) is supported in a crank chamber (14) in such a way as to be tiltable and displaceable in the axial direction, and with a controller (18, 20) by means of which an tilt angle and an axial position of the swash plate (16) can be adjusted, and with at least one piston (26, 28) connected to the swash plate (16) so that it can be actuated to move within a cylinder (22, 24), wherein the controller (18, 20) incorporates an adjustment unit (30, 32) that is separated from the piston (26, 28) and hydraulically driven,

characterized in that the adjustment unit (30, 32) is supplied with compressed oil by an oil separator (34) disposed downstream of the cylinder (22, 24) and is connected to the crank chamber (14) by way of a drain (36), and a influx (38) from the oil separator (34) to the adjustment unit (30, 32) or the drain (36) from the adjustment unit (30, 32) to the crank chamber (14) can be controlled.

Add new claim 14 as follows:

14. Axial piston according to claim 13 characterized in that in the oil separator (34) and/or in the crank chamber (14) at least part of an oil-level controller (40) is disposed which, when a specified oil level in the oil separator (34) is exceeded and/or

Application No. 10/049,690

Inventors: Thomas Tiedemann and Otfreid Schwarzkopf

Response to 08/27/03 Office Action

when the oil in the crank chamber (14) falls below a certain level, connects the oil separator (34) to the crank chamber (14) by way of a channel (42).

Add new claim 15 as follows:

15. Axial piston according to claim 13 characterized in that in the oil separator and an amount of oil that is present are matched to one another in such a way that before an oil deficiency appears in the crank chamber (14), the oil separator overflows and the overflowing oil flows back into the crank chamber (14).

Add new claim 16 as follows:

16. Axial piston according to claim 13 characterized in that in the adjustment unit (30, 32) is connected to the crank chamber (14) by way of a drain (36), and a influx (38) from the oil separator (34) to the adjustment unit (30, 32) and the drain (36) from the adjustment unit (30, 32) to the crank chamber (14) can be controlled.

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AMENDMENTS TO THE ABSTRACT

Amend the Abstract as follows:

The invention relates to an axial piston drive with a continuously adjustable piston stroke, which comprises a drive shaft (10, 12) on which a swash plate (16) is supported in a crank chamber (14) in such a way as to be tiltable and displaceable in the axial direction, as well as a controller (18, 20) by means of which an tilt angle and an axial position of the swash plate (16) can be adjusted, and at least one piston (26, 28) connected to the swash plate (16) so that it can be actuated to move within a cylinder (22, 24).

~~It is proposed that the controller (18, 20) incorporates an adjustment unit (30, 32) separated from the piston (26, 28).~~

~~(Fig. 1)~~

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REMARKS

The specification has been amended to overcome the objections raised by the Examiner in paragraphs 3, 4 and 5 of the Office Action.

Similarly, claim 4 has been amended to overcome the rejection raised in paragraph 6 of the Office Action.

Likewise, the claims have been amended to overcome the rejections under 35 U.S.C. § 112 raised by the Examiner in paragraph 7 of the Office Action.

As concerns the merits of the case, the claims have been rejected under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) in view of the Roberts '993 patent. Claim 1 clearly calls for the adjustment unit being supplied with hydraulic fluid by a unit that is independent of the medium being propelled by the piston. In Roberts, the fluid actuator mechanism 'K' is supplied by a hydraulic unit with compressed oil that is dependent on the medium propelled by the piston. The control valve assembly 'G' is in fluid connection via the lines 200, 212 with the suction chamber 147 via lines 202, 204 with the pressure chamber 145. Through the three way valve 206 the fluid actuator mechanism 'K' can be brought into direct connection with the pressure chamber 145 (short circuit between lines 202 and 220).

Thus, the prior art neither shows nor suggests supplying an adjustment unit with compressed oil by a hydraulic unit that is independent of that being propelled by the piston.

The applicant has also added new claims which reflect the allowable subject matter referred to by the Examiner in claim 10 of the Office Action.

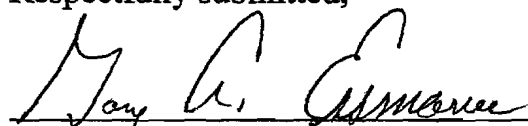
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It is earnestly believed that all of the Examiner's objections have been met and discussed and that this case is now in condition for allowance. Such action is respectfully requested.

Respectfully submitted,



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Atty. Docket No: 825-00161



UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

August 11, 2004

GARY A ESSMANN
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Dear Sir/Madam,

This is to acknowledge receipt of your refund request in the amount of \$2,010.00 for patent/application/serial number 10049690.

Your request has been forwarded to Technical Center Others for review and processing.

To inquire about the status of your refund request, please call 703 308-3642.

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